AMENDMENTS TO THE CLAIMS

Claims 1–39 (canceled)

Claim 40 (new) A laser driving device for driving a semiconductor laser, comprising:

an operating voltage detecting circuit for detecting an operating voltage of the semiconductor laser;

a voltage converter for converting an input second voltage into a first voltage greater than the input second voltage on the basis of the detected operating voltage;

control means for generating control signals to control the laser driving device; the control means being powered by the input second voltage; and

a laser driving circuit for driving the semiconductor laser on the basis of the first voltage and the control signals.

Claim 41 (new) The laser driving device according to claim 40, wherein the semiconductor laser emits a short-wavelength violet laser beam.

Claim 42 (new) The laser driving device according to claim 40, wherein the second voltage is 5V and the first voltage is between 8V and 10V.

Claim 43 (new) The laser driving device according to claim 40, wherein the operating voltage detecting circuit includes a hold circuit for detecting and holding an operating voltage of the semiconductor laser on the basis of a hold control signal and a hold voltage initial

value; and wherein the voltage converter adjusts the first voltage converted from the input second voltage on the basis of the held operating voltage.

Claim 44 (new) The laser driving device according to claim 40, wherein the control means includes:

an emmission power detector for detecting an emission power from the semiconductor laser;

a controller for generating a reference power and control signal and a data signal;

an encoder and write processor for generating a write timing pulse on the basis of the data signal; and

an automatic power control circuit for generating a power control signal on the basis of the detected emission power, the reference power and control signal, and the write timing pulse;

the semiconductor laser being controlled on the basis of the second voltage, the power control signal, and the write timing pulse.

Claim 45 (new) A method of driving a semiconductor laser, comprising the steps of:

detecting an operating voltage of the semiconductor laser;

converting an input second voltage into a first voltage greater than the input second voltage on the basis of the detected operating voltage;

generating control signals for controlling the semiconductor laser using a controller; the controller being powered by the input second voltage; and

driving the semiconductor laser on the basis of the first voltage and the control signals.

Claim 46 (new) The method according to claim 45, wherein the semiconductor laser emits a short-wavelength violet laser beam.

Claim 47 (new) The method according to claim 45, wherein the second voltage is 5V and the first voltage is between 8V and 10V.

Claim 48 (new) The method according to claim 45, wherein the detecting step includes a step of detecting and holding an operating voltage of the semiconductor laser on the basis of a hold control signal and a hold voltage initial value; and wherein the converting step adjusts the first voltage converted from the input second voltage on the basis of the held operating voltage.

Claim 49 (new) The method according to claim 45, wherein the control signal generating step includes the steps of:

detecting an emission power from the semiconductor laser;

generating a reference power and control signal and a data signal;

an encoder and write processor for generating a write timing pulse on the basis of the data signal;

generating a power control signal on the basis of the detected emission power, the reference power and control signal, and the write timing pulse; and

controlling the semiconductor laser on the basis of the second voltage, the power control signal, and the write timing pulse.